

CLAIMS

1. A communication system comprising:

a transmitting station (1) including a first physical layer process section (904), a
5 first MAC layer process section (903a, 903b), a first RLC layer process section (902), and
a first RRC layer process section (901);

a receiving station (2) including a second physical layer process section (104), a
second MAC layer process section (103a, 103b), a second RLC layer process section
(102), and a second RRC layer process section (101); and

10 an HS-SCCH and an HS-PDSCH connecting between said transmitting station
(1) and said receiving station (2), wherein

said transmitting station (1) transmits control information for controlling said
receiving station (2) to said receiving station (2) through said HS-PDSCH without making
said control information go through a process by said first RRC layer process section
15 (901), and

said receiving station (2) performs a prescribed process based on said control
information received from said transmitting station (1) without making said control
information go through a process by said second RRC layer process section (101).

20 2. The communication system according to claim 1, wherein

said control information is control information on the number of to-be-received
HS-SCCHs, and

said prescribed process is a process of changing the number of to-be-received
HS-SCCHs.

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3. The communication system according to claim 1, wherein

upper layer data sent to said first physical layer process section (904) from an upper protocol layer than said first physical layer process section (904) is transmitted to said receiving station (2) through said HS-PDSCH, and

5 said control information is transmitted to said receiving station (2) at different timing from transmission timing of said upper layer data.

4. The communication system according to claim 1, wherein

10 upper layer data sent to said first physical layer process section (904) from an upper protocol layer than said first physical layer process section (904) is transmitted to said receiving station (2) through said HS-PDSCH, and

 said control information is multiplexed with said upper layer data, and transmitted to said receiving station (2) at the same timing as transmission timing of said upper layer data.

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5. The communication system according to claim 4, wherein

 said control information is transmitted through a first HS-PDSCH, and

 said upper layer data is transmitted through a second HS-PDSCH different from said first HS-PDSCH.

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6. The communication system according to claim 5, wherein

 notifying information indicating that said control information is being transmitted from said transmitting station (1) is transmitted from said transmitting station (1) to said receiving station (2) through said HS-SCCH, and

25 said first HS-PDSCH is designated explicitly by said notifying information.

7. The communication system according to claim 5, wherein
an HS-PDSCH following said second HS-PDSCH is allocated as said first
HS-PDSCH.

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8. The communication system according to claim 4, wherein
said control information and said upper layer data are both transmitted through
said HS-PDSCH.

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9. The communication system according to claim 1, wherein
upper layer data sent to said first physical layer process section (904) from an
upper protocol layer than said first physical layer process section (904) is transmitted to
said receiving station (2) through said HS-PDSCH,

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information indicating that data is being transmitted from said transmitting
station (1) through said HS-PDSCH is transmitted from said transmitting station (1) to
said receiving station (2) through said HS-SCCH,

said information includes a part for indicating said HS-PDSCH used for
transmission of said data, and

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when said transmitting station (1) transmits said control information to said
receiving station (2), said receiving station (2) is notified that said control information is
being transmitted by the contents described in said part being different from the contents
described in said part when said data is said upper layer data.

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10. The communication system according to claim 1, wherein
upper layer data sent to said first physical layer process section (904) from an

upper protocol layer than said first physical layer process section (904) is transmitted to said receiving station (2) through said HS-PDSCH,

information indicating that data is being transmitted from said transmitting station (1) through said HS-PDSCH is transmitted from said transmitting station (1) to
5 said receiving station (2) through said HS-SCCH,

said information includes a part for indicating a data size of said data,

a data size of said control information is a fixed value, and notified to said receiving station (2) in advance, and

when said transmitting station (1) transmits said control information to said
10 receiving station (2), said receiving station (2) is notified that said control information is being transmitted by the contents described in said part being different from the contents described in said part when said data is said upper layer data.

11. A transmitting station comprising

15 a physical layer process section (904), a MAC layer process section (903a, 903b), an RLC layer process section (902), and an RRC layer process section (901),

said transmitting station transmitting control information for controlling a receiving station (2) to said receiving station through a prescribed channel without making said control information go through a process by said RRC layer process section
20 (901).

12. A receiving station comprising

a physical layer process section (104), a MAC layer process section (103a, 103b), an RLC layer process section (102), and an RRC layer process section (101),

25 said receiving station performing a prescribed process based on control

information received from a transmitting station (1) through a prescribed channel without making said control information go through a process by said RRC layer process section (101).